

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the application.

1-25. (Canceled)

26. (Currently amended) A method of treating an individual to reduce the clinical response to an a protein allergen, the method comprising administering to the individual a modified protein allergen which is less reactive with IgE in an amount and for a time sufficient to reduce the allergic reaction to the unmodified protein allergen, wherein the modified protein allergen has an amino acid sequence that is substantially identical to that of an unmodified protein allergen except that at least one amino acid has been modified in at least one IgE epitope so that IgE binding to the modified protein allergen is reduced as compared with IgE binding to the unmodified protein allergen, the at least one IgE epitope being one that is recognized when the unmodified protein allergen is contacted with serum IgE from an individual that is allergic to the unmodified protein allergen.

27. (New) The method of claim 26 wherein at least one amino acid has been modified in all the IgE epitopes of the unmodified protein allergen.

28. (New) The method of claim 26 wherein the at least one IgE epitope is one that is recognized when the unmodified protein allergen is contacted with a pool of sera IgE taken from a group of at least two individuals that are allergic to the unmodified protein allergen.

29. (New) The method of claim 26 wherein at least one modified amino acid is located in the center of the at least one IgE epitope.

30. (New) The method of claim 26 wherein at least one amino acid in the at least one IgE epitope of the unmodified protein allergen has been modified by substitution.

31. (New) The method of claim 30 wherein at least one hydrophobic amino acid in the at least one IgE epitope of the unmodified protein allergen has been substituted by a neutral or hydrophilic amino acid.

32. (New) The method of claim 26 wherein the modified protein allergen retains the ability to activate T cells.

33. (New) The method of claim 26 wherein the modified protein allergen retains the ability to bind IgG.

34. (New) The method of claim 26 wherein the modified protein allergen retains the ability to initiate a Th1-type response.

35. (New) The method of claim 26 wherein the modified protein allergen is a portion of the unmodified protein allergen.

36. (New) The method of claim 26 wherein the unmodified protein allergen is obtained from a source selected from the group consisting of legumes, milks, grains, eggs, fish, crustaceans, mollusks, insects, molds, dust, grasses, trees, weeds, mammals, and natural latexes.

37. (New) The method of claim 26 wherein the modified protein allergen is made by the process of:
identifying at least one IgE epitope in an unmodified protein allergen;
preparing at least one modified protein allergen whose amino acid sequence is substantially identical to that of the unmodified protein allergen except, that at least one amino acid has been modified in the at least one IgE epitope;
screening for IgE binding to the at least one modified protein allergens by contacting the at least one modified protein allergens with serum IgE taken from at least one individual that is allergic to the unmodified protein allergen; and

selecting a modified protein allergen with decreased binding to IgE as compared to the unmodified protein allergen.

38. **(New)** A method of treating an individual to reduce the clinical response to a food allergen, the method comprising administering to the individual a modified food allergen in an amount and for a time sufficient to reduce the allergic reaction to the food allergen, wherein the modified food allergen has an amino acid sequence that is substantially identical to that of an unmodified food allergen except that at least one amino acid has been modified in at least one IgE epitope so that IgE binding to the modified food allergen is reduced as compared with IgE binding to the unmodified food allergen, the at least one IgE epitope being one that is recognized when the unmodified food allergen is contacted with serum IgE from an individual that is allergic to the unmodified food allergen.

39. **(New)** The method of claim 38 wherein the unmodified food allergen is obtained from a source selected from the group consisting of legumes, milks, grains, eggs, fish, crustaceans, and mollusks.

40. **(New)** The method of claim 39 wherein the unmodified food allergen is obtained from a source selected from the group consisting of wheat, barley, cow milk, egg, codfish, hazel nut, soybean, and shrimp.

41. **(New)** A method of treating an individual to reduce the clinical response to a peanut allergen, the method comprising administering to the individual a modified peanut allergen in an amount and for a time sufficient to reduce the allergic reaction to the peanut allergen, wherein the modified peanut allergen has an amino acid sequence that is substantially identical to that of an unmodified peanut allergen except that at least one amino acid has been modified in at least one IgE epitope so that IgE binding to the modified peanut allergen is reduced as compared with IgE binding to the unmodified peanut allergen, the at least one IgE epitope being one that is recognized when the

unmodified peanut allergen is contacted with serum IgE from an individual that is allergic to the unmodified food allergen.

42. (New) The method of claim 41 wherein the unmodified peanut allergen is selected from the group consisting of Ara h 1, Ara h 2, and Ara h 3.

43. (New) The method of claim 26, claim 38, or claim 41, wherein the at least one IgE epitope contains 1-6, 1-5, 1-4, 1-3 or 1-2 amino acid residues that are modified as compared with the unmodified allergen.

44. (New) The method of claim 26, claim 38, or claim 41, wherein binding by serum IgE to the at least one epitope is reduced for the modified allergen to less than about 1% of that observed to the unmodified allergen.

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